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## U.S. ARMY CHEMICAL MATERIALS AGENCY

# Handling Hazardous Waste Safely at CMA Disposal Facilities and Operations

The U. S. Army Chemical Materials Agency (CMA) works with federal and state environmental regulators to dispose of chemical weapons safely. An important part of CMA's work is managing hazardous wastes that are generated throughout chemical weapons storage and disposal processes in compliance with all applicable laws.

At each CMA chemical weapons disposal facility, hazardous waste is identified and tightly regulated through the facility's operating permit issued by the state environmental agency. Storage and final disposal of all wastes are detailed in that permit. Also, each facility is designed in close consultation with state and federal regulatory agencies to ensure that waste management practices do not pose harm to the public, workers or the environment. CMA recognizes, and implements, prevention as a guiding principle of waste management: disposal facilities are designed and operated to minimize the volume and toxicity of hazardous wastes.

### Wastes from chemical weapons stockpile disposal operations

Destruction of chemical weapons and munitions at disposal facilities generates a number of wastes, such as metal parts from drained, treated munitions or decontamination solution used to treat agent-contaminated equipment. These wastes may be designated as either hazardous or non-hazardous. An example of hazardous waste is furnace ash contaminated with heavy metals. Non-hazardous wastes include such items as decontaminated steel containers and munition casings. Some wastes are treated on site, while others are sent to permitted and approved commercial off-site disposal facilities that fully comply with applicable laws and regulations.

### Wastes from routine maintenance and facilities/equipment repairs

Managing the nation's chemical weapons disposal process is an industrial activity. Workers regularly inspect, maintain and repair facilities and equipment at storage and disposal facilities to allow continued, safe operations. Depending on the equipment or area, maintenance wastes may be contaminated with chemical agent and handled appropriately.

#### *Typically, wastes from maintenance and repair activities are:*

- used oils and other lubricants from equipment with moving parts
- used hydraulic fluid
- used solvents from cleaning parts and equipment
- paints and paint supplies
- personnel protective equipment worn by maintenance workers
- worn out parts and equipment
- laboratory wastes

### Wastes from non-stockpile chemical weapons destruction

In addition to its chemical weapons stockpile disposal mission, CMA is responsible for developing and deploying technologies to destroy recovered chemical weapons and chemical agent-contaminated items that are not part of the stockpile; destroying the binary chemical weapons arsenal; and decontaminating and dismantling former chemical weapons production facilities. Like the stockpile disposal operations, these so-called non-stockpile activities result in hazardous and non-hazardous wastes that must be properly managed.

For more information,  
contact the CMA Public  
Affairs Office at  
(410) 436-3629  
(800) 488-0648



## Handling Hazardous Waste Safely at CMA Disposal Facilities and Operations (continued)

### *Wastes generated from the non-stockpile missions include:*

- used neutralizing solutions from treating recovered chemical materiel, binary chemical precursors and other chemical agent-contaminated items
- metal parts from munitions
- decontaminated bulk containers
- demolition debris from destruction of former production facilities
- worn out parts and equipment

### **Tradition of Safety**

CMA has a history of safely disposing hazardous wastes generated from the storage and destruction of chemical weapons. Work at all of the chemical agent disposal facilities around the country and from the non-stockpile program has demonstrated that CMA can dispose and treat hazardous wastes safely with a proven expertise that is applied to all

current and future disposal activities.

Throughout the history of chemical weapons disposal, CMA has followed accepted and approved practices under close oversight of the U.S. Environmental Protection Agency, Centers for Disease Control and Prevention and state environmental and regulatory agencies. CMA is committed to working with these oversight agencies to manage all wastes in accordance with existing regulations and permits for the safety of the workers, communities and the environment.

For more information on CMA, please call (800) 488-0648 or visit the Web site at [www.cma.army.mil](http://www.cma.army.mil).

### The table below highlights types of waste produced in the disposal process and their classification:

Chemical Agent Disposal Process Waste Product	Classification
Metal and metal parts from treated agent-filled munitions and containers	Non-hazardous; disposed of as clean, recyclable material
Caustic wastewater from neutralizing chemical agents with neutralization solutions	Hazardous waste (characterized as corrosive)
Ash, slag and residues from incineration furnaces	Hazardous waste, if it contains heavy metals and, depending on the state where it originated, it may be a state-listed hazardous waste
Brine salts, brine sludge and dust (particulates) from pollution control systems that clean the incineration furnace emissions	Hazardous waste
Personal protective equipment worn by workers, such as gloves and suits	Hazardous or non-hazardous waste, based on use or laboratory analysis
Wood pallets, overpack containers and other storage-related equipment and supplies	Hazardous or non-hazardous, depending on use or laboratory analysis
Laboratory wastes	Hazardous or non-hazardous